(Trimethylsilyl)methyl trifluoromethanesulfonate (cas 64035-64-9) MSDS

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers
Product name: (Trimethylsilyl)methyl trifluoromethanesulfonate

Product Number: 91744
Brand: Fluka
CAS-No.: 64035-64-9

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
- Flammable liquids (Category 3)
- Skin corrosion (Category 1B)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
- Flammable. Causes burns.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram:

Signal word: Danger

Hazard statement(s):
- H226 Flammable liquid and vapour.
- H314 Causes severe skin burns and eye damage.

Precautionary statement(s):
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor/physician.

Supplemental Hazard Statements: none


Hazard symbol(s):

R-phrase(s):
- R10 Flammable.
- R34 Causes burns.

S-phrase(s):
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S28 After contact with skin, wash immediately with plenty of water.
- S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Caution - substance not yet tested completely.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Synonyms: Trimethylsilylmethyl triflate

Formula: C5H11F3O3SSi
Molecular Weight: 236,28 g/mol
4. **FIRST AID MEASURES**

4.1 **Description of first aid measures**

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 **Most important symptoms and effects, both acute and delayed**
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 **Indication of any immediate medical attention and special treatment needed**
no data available

5. **FIREFIGHTING MEASURES**

5.1 **Extinguishing media**

**Suitable extinguishing media**
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

5.2 **Special hazards arising from the substance or mixture**
Carbon oxides, Sulphur oxides, Hydrogen fluoride, silicon oxides

5.3 **Advice for firefighters**
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 **Further information**
Use water spray to cool unopened containers.

6. **ACCIDENTAL RELEASE MEASURES**

6.1 **Personal precautions, protective equipment and emergency procedures**
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 **Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 **Methods and materials for containment and cleaning up**
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 **Reference to other sections**
For disposal see section 13.

7. **HANDLING AND STORAGE**

7.1 **Precautions for safe handling**
Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking,Take measures to prevent the build up of electrostatic charge.

7.2 **Conditions for safe storage, including any incompatibilities**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are
opened must be carefully resealed and kept upright to prevent leakage.
Recommended storage temperature: 2 - 8 °C

7.3 Specific end uses
no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate governmental standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection
Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Appearance</td>
<td>Form: clear, liquid</td>
</tr>
<tr>
<td></td>
<td>Colour: colourless</td>
</tr>
<tr>
<td>b) Odour</td>
<td>no data available</td>
</tr>
<tr>
<td>c) Odour Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>d) pH</td>
<td>no data available</td>
</tr>
<tr>
<td>e) Melting point/freezing point</td>
<td>no data available</td>
</tr>
<tr>
<td>f) Initial boiling point and boiling range</td>
<td>49 - 51 °C at 12 hPa</td>
</tr>
<tr>
<td>g) Flash point</td>
<td>48 °C - closed cup</td>
</tr>
<tr>
<td>h) Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>i) Flammability (solid, gas)</td>
<td>no data available</td>
</tr>
<tr>
<td>j) Upper/lower flammability or explosive limits</td>
<td>no data available</td>
</tr>
<tr>
<td>k) Vapour pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>l) Vapour density</td>
<td>no data available</td>
</tr>
<tr>
<td>m) Relative density</td>
<td>1,182 g/mL at 25 °C</td>
</tr>
<tr>
<td>n) Water solubility</td>
<td>no data available</td>
</tr>
<tr>
<td>o) Partition coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
</tbody>
</table>
p) Autoignition temperature
   no data available
q) Decomposition temperature
   no data available
r) Viscosity
   no data available
s) Explosive properties
   no data available
t) Oxidizing properties
   no data available

9.2 Other safety information
   no data available

10. STABILITY AND REACTIVITY
10.1 Reactivity
    no data available
10.2 Chemical stability
    no data available
10.3 Possibility of hazardous reactions
    no data available
10.4 Conditions to avoid
    Heat, flames and sparks.
10.5 Incompatible materials
    Strong oxidizing agents
10.6 Hazardous decomposition products
    Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects
    Acute toxicity
    no data available
    Skin corrosion/irritation
    no data available
    Serious eye damage/eye irritation
    no data available
    Respiratory or skin sensitization
    no data available
    Germ cell mutagenicity
    no data available
    Carcinogenicity
    IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
    Reproductive toxicity
    no data available
    Specific target organ toxicity - single exposure
    no data available
    Specific target organ toxicity - repeated exposure
    no data available
    Aspiration hazard
    no data available
    Potential health effects
      Inhalation  May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
      Ingestion  May be harmful if swallowed. Causes burns.
      Skin  May be harmful if absorbed through skin. Causes skin burns.
      Eyes  Causes eye burns.
    Signs and Symptoms of Exposure
    Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin, spasms, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
    Additional Information
    RTECS: Not available
12. ECOLOGICAL INFORMATION

12.1 Toxicity
   no data available

12.2 Persistence and degradability
   no data available

12.3 Bioaccumulative potential
   no data available

12.4 Mobility in soil
   no data available

12.5 Results of PBT and vPvB assessment
   no data available

12.6 Other adverse effects
   no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
   Product
   Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in
   igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed
   disposal company. Contact a licensed professional waste disposal service to dispose of this material.

   Contaminated packaging
   Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number
   ADR/RID: 2920  IMDG: 2920  IATA: 2920

14.2 UN proper shipping name
   ADR/RID: CORROSIVE LIQUID, FLAMMABLE, N.O.S. ((Trimethylsilyl)methyl trifluoromethanesulfonate)
   IMDG: CORROSIVE LIQUID, FLAMMABLE, N.O.S. ((Trimethylsilyl)methyl trifluoromethanesulfonate)
   IATA: Corrosive liquid, flammable, n.o.s. ((Trimethylsilyl)methyl trifluoromethanesulfonate)

14.3 Transport hazard class(es)
   ADR/RID: 8 (3)  IMDG: 8 (3)  IATA: 8 (3)

14.4 Packaging group
   ADR/RID: II  IMDG: II  IATA: II

14.5 Environmental hazards
   ADR/RID: no  IMDG Marine pollutant: no  IATA: no

14.6 Special precautions for user
   no data available

15. REGULATORY INFORMATION

   This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
   no data available

15.2 Chemical Safety Assessment
   no data available

16. OTHER INFORMATION

   Further information
   The above information is believed to be correct but does not purport to be all inclusive and
   shall be used only as a guide. The information this document is based on the resent state
   of our knowledge and is applicable to the product with regard to appropriate safety precautions.
   It does not represent any guarantee of the properties of the product. guidechem shall not be
   held liable for any damage resulting from handling or from contact with the above product.
   See reverse side of invoice or packing slip for additional terms and conditions of sale.